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# WATER QUALITY M E M O R A N D U M

Utah Coal Regulatory Program

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March 10, 2011

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JS 15 Mar 11*

FROM: April A. Abate, Environmental Scientist III *3-14-2011*

RE: 2010 Third Quarter Water Monitoring, Nevada Electric Investment Corporation, Wellington Preparation Plant, C/007/0012, Task ID #3642

The Wellington Preparation Plant is currently in temporary cessation. No mining or coal processing activities currently take place there, nor is the site in active reclamation. Water-monitoring requirements are in Sections 7.23 and 7.31.2 through 7.31.22, and Tables 7.24-2 and 7.24-5 of the MRP.

**1. On what date does the MRP require a five-year re-sampling of baseline water data.**

Baseline parameters are collected in the year preceding permit renewal. The permit for the Wellington Preparation Plant was renewed on November 30, 2009.

**2. Were data submitted for all of the MRP required sites?**

**Streams and Ponds**

YES ☒ NO ☐

The Permittee is required to analyze samples from streams at SW-1, SW-2A, SW-3, and SW-4 and from ponds at SW-5, SW-6, SW-7, and SW-8 for the parameters in Table 7.24-5, and to measure flow only at SW-2. In addition, samples from SW-4 and SW-5 are to also be analyzed for benzene, toluene, ethylbenzene, xylene, and naphthalene (BTEXN) and propylene glycol. Monitoring is done quarterly.

During the third quarter 2010, samples were collected from SW-1 and SW-2A. Flow only was measured from SW-2. None of the other monitoring locations reported flow. None of the pond samples reported any water during this monitoring period.

**Wells**

YES ☒ NO ☐

The Permittee is required to analyze samples quarterly from GW-1, GW-3, GW-4, GW-6, GW-7, GW-8, GW-9, GW-9B, GW-10, GW-12, GW-13, GW-14, GW-15A, GW-15B, GW-16, and

GW-17 for the parameters in Table 7.24-2, and to measure depth only at GW-2.

Wells GW-3, GW-13 and GW-17 were not sampled. GW-3 was reported as dry and GW-17 were reported as not having enough water in it to monitor. GW-13 was gauged for water level only. There was no notation in the comments that there was an inadequate amount of water in the well to sample. However, given the depth to water measurement being close to past levels, presumably this was the case.

**UPDES**

YES ☒ NO ☐

Six UPDES permitted outfalls at the Wellington Preparation Plant are monitored monthly: #UTG040010-003, 004, 005, 006, 007, and 008. None of the UPDES sites reported flow during the third quarter 2010.

**3. Were all required parameters reported for each site?**

**Streams and Ponds**

YES ☒ NO ☐

**Wells**

YES ☒ NO ☐

**UPDES**

YES ☐ NO ☐

Not applicable

**4. Were any irregularities found in the data?**

**Streams and Ponds**

YES ☒ NO ☐

**Wells**

YES ☒ NO ☐

Parameters that were flagged as being outside two standard deviations were the typical parameters associated with hard water and salt. In general, these were the groundwater samples that have historically shown indicators of poor groundwater quality. The groundwater quality in the area is considered poor given the abundant sedimentary rock and the high concentrations of total dissolved solids (TDS) found along this reach of the Price River.

GW-1: chloride

GW-15A: TDS, sodium and potassium, chloride

GW-15B: bicarbonate, sodium and chloride

GW-16: calcium, hardness, chloride, bicarbonate, alkalinity

UPDES

YES ☐ NO ☐

Not Applicable. No discharges were reported from any of the UPDES monitoring locations.

**5. Did the Permittee make a timely submittal of all data, including initially missing data, and satisfactorily explain irregular data?**

YES ☒ NO ☐

**6. Does the Mine Permittee need to submit more information to fulfill this quarter's monitoring requirements?**

YES ☐ NO ☒

**7. Based on your review, what further actions, if any, do you recommend?**

- Monitoring wells GW-12 is frequently inundated with surface water, GW-3 is usually dry and GW-13 and GW-17 typically do not yield enough water to sample. Since these wells are not performing as they were intended, the quality of the data when provided is questionable. The Division recommends that these wells be reevaluated for their usefulness and suggests properly abandoning wells that do not appear to be meeting the objectives of the Probable Hydrologic Consequences (PHC) and current water monitoring plan in the Wellington Mining and Reclamation plan.

**8. Follow-up from last quarter, if necessary.**

- During the second quarter, surface water sample collected from SW-1 in June 2010 yielded very high levels of total suspended solids (TSS), total iron, total manganese, and settleable solids. These abnormal readings were attributed to turbid storm water runoff at this location. SW-2A at the Farnham diversion located further downstream indicated that TSS and total iron levels also spiked. This appears to be a trend that seems to occur in June, according to data from the past two years. Levels of these constituents returned to normal based on the sample data from the 3<sup>rd</sup> quarter.